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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,328	03/25/2004	Atsushi Uejima	07250029aa	5421

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EXAMINER

MARTIN, LAURA E

ART UNIT

PAPER NUMBER

2853

DATE MAILED: 08/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

22

Office Action Summary

Application No.

10/808,328

Applicant(s)

UEJIMA, ATSUSHI

Examiner

Laura E. Martin

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5 is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/14/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsunaga et al. (JP 2000141708) in view of Higashiyama (JP 02307731).

Matsunaga et al. discloses:

As per claim 1: a method of preparing a hard copy by forming a transparent coating layer on a recording medium in areas where image has been recorded, comprising steps of: applying clear droplets clear droplets to a recording medium (figure 1, element 25 and [0029]) depositing said droplets in the image-recorded areas of the recording medium so as to form a coating layer [0014]; curing said clear droplets [0034], so that a hard copy is prepared (figure 1, element W).

As per claim 9: a hard copy (figure 1, element W).

Matsunaga et al. does not disclose:

As per claim 1: curing said droplets while they are in flight.

As per claim 9: the prepared molding is textured and looks real.

Higashiyama discloses:

As per claim 1: curing droplets flying from a recording head in flight (abstract).

As per claim 9: the prepared molding is textured and looks real (abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method taught by Matsunaga et al. with the disclosure of Higashiyama in order to provide for a quicker method of curing as well as a method for creating three-dimensional images.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsunaga et al. (JP 2000141708 and Higashiyama (JP 02307731), and further in view of Suzuki et al. (US 6783227).

Matsunaga et al. discloses:

As per claim 3: an adjustment of the intensity of said curing step that is to be performed on said droplets is for changing viscosity of the droplets as they are deposited on the recording medium [0013].

Matsunaga et al. as modified does not disclose:

As per claim 2: a curing intensity of said curing step that is to be performed on said droplets is adjusted in accordance with the image as recorded on said recording medium.

Suzuki et al. discloses:

As per claim 2: a curing intensity of said curing step that is to be performed on said droplets is adjusted in accordance with the image as recorded on said recording medium (column 9, lines 18-37).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method taught by Matsunaga et al. as modified with the disclosure of Suzuki et al. in order to create a higher quality printing method.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsunaga et al. (JP 2000141708 and Higashiyama (JP 02307731), and further in view of Kawamata et al. (US 4952444).

Matsunaga et al. and Higashiyama teach the method of preparing a hard copy in claim 1; however, neither disclose the surface roughness of said coating layer that is formed of said droplets as they have been deposited and hardened is adjusted by changing the viscosity of said droplets as they are deposited on said recording medium.

Kawamata et al. teaches disclose the surface roughness of said coating layer that is formed of said droplets as they have been deposited and hardened is adjusted by changing the viscosity of said droplets as they are deposited on said recording medium (column 3, lines 1-14).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of preparing a hard copy taught by Matsunaga et al. as modified in order to create a stronger printed image.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsunaga et al. (JP 2000141708 and Higashiyama (JP 02307731), and further in view of Frazzitta et al. (US 5750186).

Matsunaga et al. discloses applying infrared radiation [0059] and Higashiyama discloses curing droplets during flight (abstract); however, neither disclose a thermosetting resin material.

Frazzitta discloses a thermosetting resin material (column 22, lines 62-65).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method taught by Matsunaga et al. as modified with the disclosure of Frazzitta in order to create a higher quality image.

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsunaga et al. (JP 2000141708 and Higashiyama (JP 02307731), and further in view of Fujii et al. (US 6626531).

Matsunaga et al. and Higashiyama disclose: a method.

Matsunaga et al. and Higashiyama do not disclose:

As per claim 7: the prepared hard copy accurately reproduces gloss.

As per claim 8: the prepared hard copy presents desired surface properties even if there is unevenness in recording density.

Fujii e et al. discloses:

As per claim 7: the prepared hard copy accurately reproduces gloss (column 6, lines 16-26).

As per claim 8: the prepared hard copy presents desired surface properties even if there is unevenness in recording density (column 6, lines 16-26).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method taught by Matsunaga et al. as modified with the disclosure of Fujii et al in order to create a higher quality and scratch-resistant image.

Allowable Subject Matter

Claim 5 is allowable.

Response to Arguments

Applicant's arguments with respect to claims 1-4 and 6-9 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of


the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura E. Martin whose telephone number is (571) 272-2160. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Laura E. Martin


STEPHEN MEIER
SUPERVISORY PATENT EXAMINER